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Good countries or good projects? Macro and micro correlates of World Bank project performance[☆]

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ABSTRACT

This paper investigates macro and micro correlates of aid-financed development project outcomes, using data from over 6000 World Bank projects evaluated between 1983 and 2011. Country-level "macro" measures of the quality of policies and institutions are strongly correlated with project outcomes, consistent with the view that country-level performance matters for aid effectiveness. However, a striking feature of the data is that the success of individual development projects varies much more *within* countries than it does *between* countries. A large set of project-level "micro" variables, including project size, project length, the effort devoted to project preparation and supervision, and early-warning indicators that flag problematic projects during the implementation stage, accounts for some of this within-country variation in project outcomes. Measures of World Bank project manager quality also matter significantly for the ultimate project outcomes. We discuss the implications of these findings for donor policies aimed at aid effectiveness.

1. Introduction

A vast empirical literature has sought to answer the question of when foreign aid is effective in achieving its desired objectives. One influential strand of this literature has focused on the aggregate country-level impact of aid, typically on GDP growth, and has necessarily also focused on country-level factors that determine the aggregate effects of development assistance.[1] However, recognizing that most of foreign aid is provided in the form of individual aid-financed development projects,[2] another influential strand of the literature focused on aid effectiveness at the project level. During the 1970s and 1980s, this typically took the form of calculations of economic rates of return in aid projects, either prospectively in order to justify financing particular projects, or to assess their effectiveness after the fact. More recently, a large literature has used more rigorous impact evaluation techniques, often in the form of randomized controlled trials, to understand the effects of particular aid-financed interventions at the level of individual projects. Out of necessity, this project-level literature has for the most part focused on project-level factors that matter for the success or failure of individual projects.

In this paper, we use a very large dataset of over 6000 World Bank projects, implemented in 130 developing countries since the 1970s, to simultaneously investigate the relative importance of country-level "macro" factors and project-level "micro" factors in driving project-level outcomes. Our effort to bridge the gap between the country-level and project-level aid effectiveness literatures is motivated by the observation that, while country-level factors are important for the aid project outcomes, these outcomes vary much more across projects

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[1] This line of research has produced a wide variety of conflicting results, to the point where Temple (2010) suggests that it "must be regarded as a work in progress". Recent assessments over the past decade range from cautiously optimistic Burnside and Dollar (2000), Clemens et al. (2012), Hansen and Tarp (2000), Minoiu and Reddy (2009), and Arndt et al. (2010); to ambivalent, Roodman (2007); to skeptical and pessimistic, Easterly et al. (2004), Doucouliagos and Paldam (2009), and Rajan and Subramanian (2008).

[2] The subdivision of aid into individual development projects is quantitatively important. For example, AidData, the largest existing compendium of project-level aid data, records over 1 million individual development finance 'activities' over the past 50 years (http://irtheoryandpractice.wm.edu/projects/plaid/).

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within countries than they do *between* countries. This implies that both project-level factors (which often are at least in part under the control of the aid agency implementing project), as well as country-level characteristics (which typically are beyond the control of aid donors), need to be taken into account when assessing project performance, and aid effectiveness more generally.

Our measure of project-level success consists of a subjective assessment of the extent to which individual World Bank projects were able to attain their intended development objectives. These ratings are generated through internal World Bank project management and evaluation procedures, which we describe in more detail below. While we acknowledge upfront that these ratings are highly-imperfect indicators of the ultimate effects of projects, we will for terminological convenience refer to these ratings as “project outcomes”. In addition, we share with the rest of the project-level literature the important limitation that the average effectiveness of individual aid projects may well not coincide with the aggregate impacts of aid. For example, there may be complementarities between individual aid projects, or between aid- and non-aid-financed projects, that contribute to a greater aggregate impact than any individual aid project. Conversely, to the extent that aid money is fungible, even highly-successful aid-financed projects may have the side effect of freeing up resources for less beneficial forms of recipient-government spending, so that the aggregate impact of aid is less than the project-level evidence would suggest.

With these qualifications in mind, we first document a set of robust partial correlations between project outcomes and basic measures of country-level policy and institutional quality observed over the life of the project. This echoes other findings in the literature on macro-level determinants of aid effectiveness, which emphasize the role of country-level proxies for the quality of policies and institutions in driving project outcomes. However, enthusiasm for this finding on the importance of country-level variables for project outcomes needs to be tempered by the observation that roughly 80 percent of the total variation in project outcomes in our sample occurs across projects *within* countries, rather than *between* countries. This basic observation suggests that there are large returns to gathering and studying potential project-level correlates of project outcomes, which have largely been overlooked in the cross-country literature on aid effectiveness. We draw extensively on the World Bank's internal databases to extract three categories of such project-level variables: (1) basic project characteristics such as the size and sector of the project, and the amount of resources devoted to its preparation and supervision, (2) potential early-warning indicators of project success retrieved from the World Bank's administrative processes for monitoring and implementing active projects; and (3) information on the identity of the World Bank staff member responsible for the project.

We find that several project-level variables, such as project size, project length, the extent of preparation and supervision costs, delays in starting projects, and whether the project was restructured or was flagged as problematic early in the life of the project, are significant correlates of project-level outcomes. However, interpreting these partial correlations is complicated by the fact that many of the project-level characteristics we observe are not randomly assigned to projects, but rather reflect deliberate choices by those responsible for designing and implementing the project. For example, more challenging projects might require greater supervision by World Bank staff, and might also be more likely to result in unsatisfactory outcomes. While we lack a plausibly exogenous source of variation in project characteristics that can be used to pin down causal effects, we make an extensive effort to document and interpret the size of the likely biases due to this endogeneity problem.

In the final section of the paper we explore the role of differences in the quality of World Bank staff assigned to manage projects (known as “task team leaders”) in explaining variation in project performance. We study this question in a reduced sample of projects where we have information on the identity of the task team leader, and we also have meaningful variation in project outcomes across both countries and task team leaders. Our main finding here is that task team leader fixed effects are of comparable importance to country fixed effects in accounting for the variation in project outcomes, suggesting a strong role for task team leader-specific characteristics in driving project outcomes. We also document that task team leader quality (as proxied by the average outcome rating on all the other projects managed by the same staff member) is a highly significant predictor of project outcomes.

Our results are based on the analysis of projects of just one aid donor, the World Bank. Despite this particular institutional focus, we believe that the evidence in this paper has broader implications for aid effectiveness beyond the World Bank itself. The World Bank is one of the largest single aid donors in the world, its basic model of financing and implementing specific aid projects is by far the most common mode of aid delivery among all aid donors. While each aid donor has its own mechanisms for allocating resources across countries, for identifying specific aid projects to finance within countries, and for determining the management, implementation, supervision, and evaluation of these projects, a few implications of our findings are plausibly relevant to the wider aid community. The first is basic and not very new, though it is confirmed by the updated and expanded work in this paper: targeting aid to countries with better policies and institutions pays off, as rates of project success are significantly higher in countries with good policy, as measured by the CPIA ratings. However, the very large heterogeneity in project performance within countries suggests that policies to improve aid effectiveness could focus more on project-level factors in addition to country-level factors. These include those that make individual projects difficult to restructure or cancel outright even after early indications of problems arise, as well as those that underlie the large differences in project performance across task managers that we observe in the data.

The rest of this paper proceeds as follows. In the next section we briefly summarize related literature that has also studied the World Bank project-level data we work with here. In Section 3 we describe the project-level outcome data in detail. Sections 4 and 5 contain our main empirical results on the links between country and project-level characteristics and project outcomes. Section 6 addresses the problem of unobserved project characteristics in driving our results, while Section 7 documents the importance of task team leader characteristics in explaining project outcomes. Section 8 offers concluding remarks and a discussion of the implications of these findings for policies to improve aid effectiveness.

2. Related literature

This paper is not the first to study the correlates of individual World Bank project outcomes. In earlier contributions, Isham et al. (1997) and Isham and Kaufmann (1999) studied the determinants of project-level estimated ex-post economic rates of return. Both of these papers focused primarily on country-level factors affecting project returns, notably the role of democracy and civil liberties in the first, and the role of sound macroeconomic policies in the second. Many subsequent papers have similarly focused on country-level determinants of project performance, typically focusing on country-level averages of the same project success measure we use here. For instance, Dollar and Levin (2005) estimate a series of cross-country regressions of country-average project success ratings on a set of country-level explanatory variables, emphasizing the role of differences in institutional quality in driving cross-country differences in average project performance. Guillaumont and Laajaj (2006) focus on country-level volatility in accounting for project-level success, while Chauvet et al. (2010) emphasize country-level conflict measures. In addition Dreher et al. (2010)